

The opinion in support of the decision being entered today
is *not* binding precedent of the Board

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GERALD F. MCBREARTY, SHAWN P. MULLEN, and
JOHNNY M. SHIEH

Appeal 2007-1340
Application 09/996,125¹
Technology Center 2100

Decided: July 27, 2007

Before MICHAEL R. FLEMING, *Chief Administrative Patent Judge*,
and FRED E. MCKELVEY, *Senior Administrative Patent Judge*, and
LANCE LEONARD BARRY, ALLEN R. MACDONALD, and
SCOTT R. BOALICK, *Administrative Patent Judges*.

BOALICK, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Application for patent filed November 28, 2001, entitled "System And Method For Indicating Whether A Document Is Cached." Application published on May 29, 2003 as U.S. Application Publication No. 2003/0101234 A1. The real party in interest is International Business Machines Corporation.

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-3, 5-15, and 17-29, all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The Invention

Appellants' invention relates to a system and method for displaying Web pages on a Web browser. (Specification 1:18-19.) In particular, the invention provides cache status information about a document, such as a Web page, through a user interface when a user rolls a cursor over an address that points to the Web page. (Specification 1:20-22.) The invention allows the user to make an informed decision to either load the cached document, load only portions of the cached document, or load a completely new or "fresh" document. (Specification 1:22 to 2:1.)

The Specification explains that "one of the biggest problems currently on the Internet [is] lack of adequate bandwidth" and "the delay involved in retrieving . . . information [from the Internet] frustrates the user."

(Specification 4:6-9.) To help alleviate delays due to finite bandwidth, "it is [a] common practice for Web browsers to cache pages" retrieved by a user.

(Specification 4:12-13.) "Typically, as a user browses documents using the Internet or World Wide Web, the URL [(Uniform Resource Locator)] or portions of the document being browsed can be stored or cached."

(Specification 4:22 to 5:1.) In this context, caching "means the copying of a document, made incidental to the first access to the page, and storage of that copy for that purpose of speeding subsequent access." (Specification 5:2-4.)

Caching "is done to help speed up the loading of the [Web] page if the user visits the page at a subsequent date." (Specification 5:5-6.)

The Specification also explains that "current browsers do not provide enough status information on the documents or pages that are cached to help a user make an informed decision" and that "some users hesitate to visit certain URLs for fear that the documents located at the URLs will take too long to load due to their slow network connection." (Specification 8:16-20.) "If the users were aware of when the cached page was cached or what percentage of the page was cached this would help them make an informed decision and enhance their browsing experience." (Specification 8:20-22.)

In order to solve the problems said to exist in the prior art, "the present invention is embodied in a system and method for providing cache status information about a document, such as a web page, through a user interface when a user digitally points to an address, such as a URL, pointing to the document accessible on a browser application." (Specification 9:3-9.)

The Specification explains that:

After the user views the cache status information, the user is provided with load options, for example, either: 1) to load the cached document; 2) to load designated portions of the document either from the cache or with newly loaded and "fresh" content; or 3) to load a completely new or "fresh" document.

(Specification 9:10-13.)

Appellants' Figure 7 is instructive. The Specification explains that:

FIG. 7 illustrates further options in another embodiment of the present invention. . . . the [computer program] module is preprogrammed to bring up a floating menu in response to user action,

such as the user "right clicking" on the mouse 126 when it is pointing to a URL for displaying a load menu 700. The load menu 700 allows the user to view the cache status information 270, 272, 274 in a pop-up menu format that is located proximate to the URL in question.

Further, after the user views the cache status information 430 or from menu 700, and before the web page is loaded, a user is given load options 701. The load options 701 are an extension of the load menu 700 and include several options. For example, the user is given the following options: 1) load the cached document 702; 2) load designated portions of the document either from the cache or with newly loaded and "fresh" content 704; or 3) load a completely new or "fresh" document 706.

(Specification 22:6-19.)

Figure 7 is reproduced below:

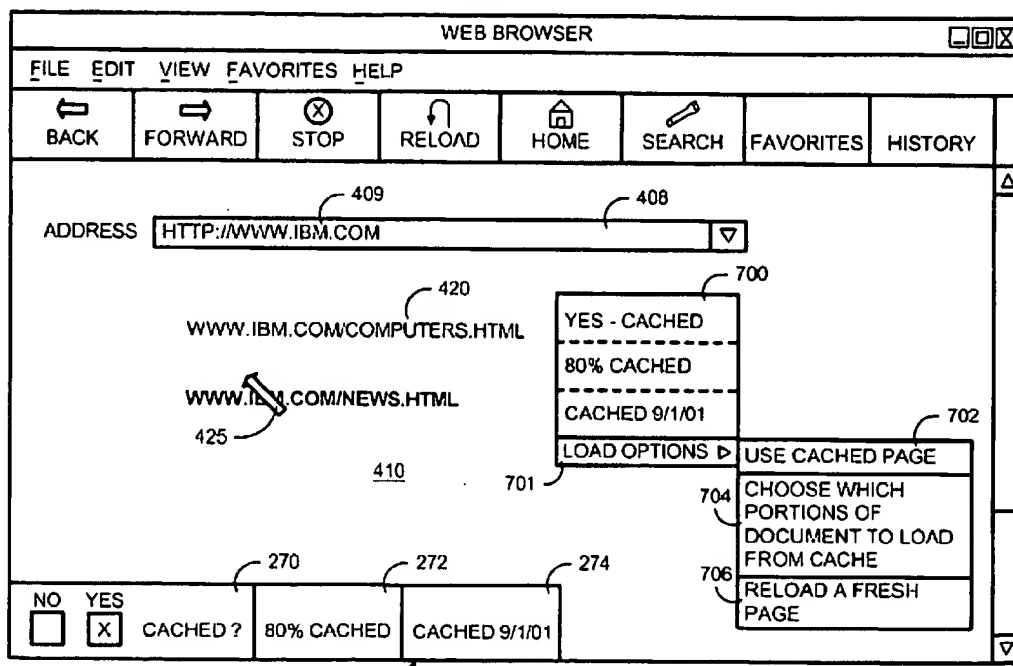


FIG. 7

The Figure shows a Web browser with a Web page that has been previously cached and a load menu with load options for the cached Web page.

Claims 1-3, 5-15, and 17-29 are pending in the application. Claims 1, 13, and 23 are independent.

Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A management process operating on a computer system that has cached documents stored on the computer system, the process comprising:

displaying cache status information about the cached documents when a user digitally points to an address associated with one or more of the cached documents;

displaying a percentage of the document that was previously cached with the cache status information; and

allowing the user to digitally point to selected designated portions [sic--portions] of the cached document and only loading the designated portions of the cached document.

The Rejections

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Acharya	US 6,826,593 B1	Nov. 30, 2004
Gong	US 6,243,089 B1	Jun. 5, 2001 (filed Jun. 30, 1998)
Banga	US 2001/0020248 A1	Sep. 6, 2001 (filed May 11, 2001)

The following rejections are before us for review:

1. Claims 1-3, 5, 7-15, 17, 19-25, and 27-29 stand rejected under 35 U.S.C. § 103(a) as being obvious over Acharya and Gong.
2. Claims 6, 18, and 26 stand rejected under 35 U.S.C. § 103(a) as being obvious over Acharya, Gong, and Banga.

Arguments of the Appellants

Appellants contend that the Examiner erred in rejecting claims 1-3, 5-15, and 17-29 under 35 U.S.C. § 103(a).² In particular, Appellants assert that Acharya, Gong, and/or Banga do not teach or suggest allowing the user to digitally point to selected designated portions of the cached document and only loading the designated portions. (Br. 5-6; Reply Br. 3-4.) Appellants also argue that the Examiner used impermissible hindsight. (Br. 6; Reply Br. 3.) The Examiner contends that each of the claims is properly rejected. (Answer 3-6.)

Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See* 37 C.F.R. § 41.37(c)(1)(vii). We select claim 1 as the representative claim.

² Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for their respective details. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).

Because Appellants have not argued any of the claims separately, all of the claims stand or fall with claim 1.

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 103(a). That is, given the teachings of the prior art, have Appellants shown that the differences between the claims and the prior art are sufficient to render the claimed subject matter unobvious to a person skilled in the art at the time the invention was made?

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

Acharya

1. Acharya describes a method for providing a user-selectable version of a file with information content in response to user selection of a hyperlink to that information content. (Abstract.) Acharya teaches that a user typically accesses files stored on the Web using a Web browser, and that "[a] user's selection of a hyperlink acts as a user's request for transmission of the file associated with the hyperlink to the [user's] client." (Col. 2, ll. 9-20.) In Acharya, the user controls which version of the file is provided. For example, "[a] high resolution

version of a file may be provided at a high cost, in terms of network resources and latency in reception of the file or, at the user's option, a smaller, lower resolution, version of the file may be provided with a corresponding savings in such costs." (Col. 5, ll. 57-61.)

2. Acharya teaches that Web pages are predominately graphical and that large graphical files slow the response time for Web users. (Col. 2, ll. 34-38.) This delay, called "latency," is primarily a function of the size of the file and the bandwidth of the connection over which the file is transmitted. (Col. 2, ll. 39-41.)
3. Acharya explains that latency is a reason that users desire control over the selection and downloading of files. "As a result of latency, users are likely to welcome an option to retrieve a lower quality, smaller version of a file, provided that the file can be provided relatively quickly, i.e., with savings in latency." (Col. 3, ll. 62-65.) Also, "[m]any users would likely choose to reject some image or document files, receive a lower resolution version of others fairly quickly, and would be willing to wait longer for a higher resolution version of others." (Col. 4, ll. 9-12.)
4. Acharya also explains that there are other reasons that users desire control over the selection and downloading of files. "[A]part from latency issues, some users requesting a file would like to select a version of the file in a format that is translatable by their Web clients,

due to the resources available to the user's Web clients." (Col. 4, ll. 10-16.)

5. To reduce latency, Acharya teaches that a memory cache may be provided by an Internet Service Provider on a proxy computer. (Col. 3, ll. 6-7.) If a copy of a requested file is in the cache, it is forwarded to the user's client computer provided that the file is not stale. (Col. 3, ll. 19-23.) Methods for determining whether a cached file is stale are well known. (Col. 3, ll. 23-24.)
6. In the method taught by Acharya, a user may request and receive files in various formats and resolutions. (Col. 4, ll. 47-49; col. 8, ll. 36-42.) "A user first determines information content the user wishes to receive." (Col. 4, ll. 53-54.) The user requests transmission of the file by selecting a hyperlink on a Web page being viewed. (Col. 4, ll. 50-53; col. 9, ll. 21-22.)
7. Acharya teaches that "[w]hen a user first requests a Web page that he wishes to receive, . . . the server specified in the URL responds by transmitting a skeleton of the Web page to the client, the skeleton containing links or pointers to images and/or other files embedded within the Web page." (Col. 8, ll. 58-64.) "The Web browser then automatically requests these embedded files from the server to load the Web page." (Col. 8, ll. 64-66.)

8. With reference to Figure 4, Acharya further teaches that the server transmits the embedded files to the proxy (step 50) and the proxy transmits the files to the client (step 55). (Col. 8, l. 66 to col. 9, l. 1.) The version of each file sent from the proxy to the client can be set by a software default setting or a user-specified default setting. (Col. 9, ll. 1-5.) "Along with the transmission of the skeleton of the requested Web page, the proxy transmits a computer program . . . capable of generating, upon a client's request for a target file, a menu of versions of the target file which are available." (Col. 9, ll. 8-14.)
9. Referring again to Figure 4, Acharya teaches that the user requests a target file by selecting a hyperlink in the displayed Web page (step 60), a menu is then generated and the user selects a version of the target file from the menu (step 70). (Col. 9, ll. 21-40.) The user selected version of the target file is transmitted to the proxy (step 75), and "the proxy checks the cache to determine if the selected version is resident in the cache" (step 80). (Col. 9, ll. 45-53.) If the selected version is in the cache, the proxy determines if it is a current version (step 85). (Col. 9, ll. 54-56.) If the cached version of the file is current, the proxy transmits it to the client (step 90). (Col. 9, ll. 57-59.) Otherwise, the proxy requests a current version of the file from the server (step 115). (Col. 9, ll. 59-62.)
10. Acharya "is particularly useful in the World Wide Web environment where high degrees of latency are common and Web client resources

and individual users' requirements and translation capabilities are vastly heterogeneous." (Col. 6, ll. 11-15.)

11. Acharya does not teach that the file selected by the user is a *cached* file. (*Passim.*) Acharya also does not teach that the selected file that is transmitted to the user is a *cached* file. (*Passim.*)

Gong

12. Gong describes a Web browser display with a visual status indication that informs users that the currently displayed Web page is old, partly old, or new. (Col. 1, ll. 52-57; col. 4, ll. 1-26; Figures 3-5.)
13. Gong teaches that pages downloaded by Web browsers usually are cached locally. (Col. 1, ll. 15-18.) Visible links enable the user to request a previously displayed page. (Col. 1, ll. 18-19.) "In order to speed up operations and avoid unnecessary network communications, a browser receiving a request for a previously displayed page, usually retrieves that page either entirely from cache, or partly from cache and partly from the originating network server." (Col. 1, ll. 19-24.) Gong explains that:

Partial retrieval via the network usually occurs automatically (i.e. without explicit user request) when a requested page contains information requiring interaction between the browser and the originating server."

(Col. 1, ll. 24-28.)

14. Gong teaches that "[a] problem related to this cached handling of page information is that an inexperienced user may be unaware that a page currently being redisplayed contains 'old' information (i.e. information retrieved from cache), when the user expects to see only 'new' information." (Col. 1, ll. 29-33.) Gong further explains that, "[a]lthough browsers generally provide a 'reload' selector (e.g. a function selectable on the display screen, such as a menu item, icon or button), the inexperienced user requiring new information may not realize that he or she is viewing old information, and therefore fail to explicitly request reloading of the respective page." (Col. 1, ll. 36-41.) "Consequently, information in a re-displayed page could be misinterpreted by the user, with resulting degradation of productivity of the user per se and their computer equipment." (Col. 1, ll. 43-46.)
15. In a section entitled "Typical Browser Display Format," Gong describes a Web browser "'Reload' button that when selected causes the browser to request reloading of the page currently being viewed (from a remote origin server, via the network, etc.)." (Col. 3, ll. 40-43.) Gong teaches that "[a]lthough the not-shown Reload button on toolbar bar 6 is explicitly labelled 'Reload', its function and/or appropriate occasions for its use may not be understood by an inexperienced user; inasmuch as such users generally has no indication that such reloading is either required or desirable." (Col. 3, ll. 50-54; Figure 2.) Gong teaches that toolbar buttons such as the Reload button "are selectable by operation of ('clicking on') a switch

on a pointing device when a cursor positioned by that device overlies [the] respective button[]." (Col. 3, ll. 36-39.)

16. Figure 3 of Gong illustrates page status indications that are provided by circular icons 16-18. (Col. 4, ll. 1-3.) "[I]con 16 indicates that the content of the currently displayed page is entirely new, icon 17 indicates the respective content to be partly old, and icon 18 indicates the respective content to be entirely old." (Col. 4, ll. 3-6.)
17. In one embodiment, Gong teaches that "a status icon is incorporated into the browser reload selection button, to indicate that data in a currently viewed page is old or at least partially old and to make selection of the reload function a natural extension of that status indication." (Col. 2, ll. 10-15; col. 4, ll. 49-53; Figure 8.) In particular, Figure 8 shows a status indication and a reload function combined into a "single composite graphic; e.g. a circular status indication (or one of two or three indications) 35 within a Reload button selector 36." (Col. 4, ll. 49-53.)

18. Figures 3 and 8 of Gong are reproduced below:

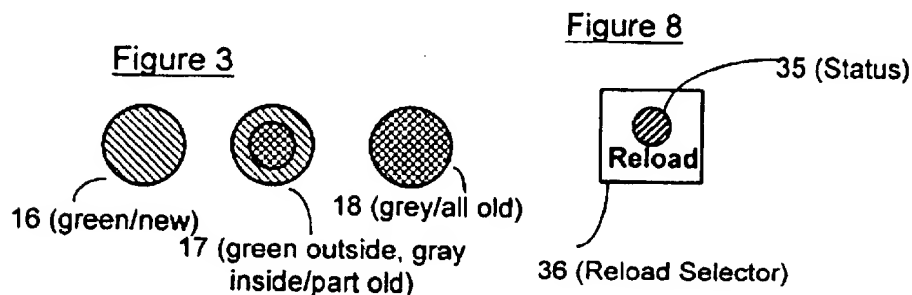


Figure 3 shows status indicators having the form of selectively illuminated icons with colors distinguishing the currently displayed Web page as entirely new, partly old, or entirely old. Figure 8 shows a status indicating icon placed inside a button icon representing a reload button selector.

19. Gong does not teach that the user may decide to retrieve a Web page partly from cache and partly from the originating network server.
(*Passim.*)

Banga

20. Banga describes a method for transferring and displaying Web pages for low-speed connections to a network. (Paragraph 0001.) Banga is concerned with latency and the desire to make better use of the caching ability of Web browsers. (Paragraphs 0002 & 0006.) The method taught by Banga "relies on the retrieval of a cached version of a requested [Web] page and the subsequent transmission . . . of only the differences between the cached version and the current version." (Paragraph 0019.)

PRINCIPLES OF LAW

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S. Ct. at 1734, 82 USPQ2d at 1391 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls."). The Court in *Graham* further noted that evidence of secondary considerations, such as commercial success, long felt but unsolved needs, failure of others, etc., "might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." 383 U.S. at 18, 148 USPQ at 467. "If a court, or patent examiner, conducts this analysis and concludes the claimed subject matter was obvious, the claim is invalid under § 103." *KSR*, 127 S. Ct. at 1734, 82 USPQ2d at 1391.

The mere existence of differences between the prior art and the claim does not establish nonobviousness. *Dann v. Johnston*, 425 U.S. 219, 230, 189 USPQ 257, 261 (1976). The issue is "whether the difference between the prior art and the subject matter in question 'is a difference sufficient to render the claimed subject matter unobvious to one skilled in the applicable art.'" *Dann*, 425 U.S. at 228-29, 189 USPQ at 261 (citation omitted) (finding system for automatic record keeping of bank checks and deposits obvious in view of nature of extensive use of data processing systems in banking industry and "closely analogous" patent for an automatic data processing system used in a large business organization for keeping and

updating system transaction files for each department of the organization). To be nonobvious, an improvement must be "more than the predictable use of prior art elements according to their established functions." *KSR*, 127 S. Ct. at 1740, 82 USPQ2d at 1396.

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *id.* at 1739, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that "the principles laid down in *Graham* reaffirmed the 'functional approach' of *Hotchkiss*, 11 How. 248 [(1850)]." *KSR*, 127 S. Ct. at 1739, 82 USPQ2d at 1395 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12, 148 USPQ 459, 464 (1966) (emphasis added)), and reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740, 82 USPQ2d at 1396. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use

of prior art elements according to their established functions." *Id.* at 1740, 82 USPQ2d at 1396.

The Supreme Court made clear that:

[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.

KSR, 127 S. Ct. at 1740, 82 USPQ2d at 1396. The Court explained that:

[o]ften, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

Id. at 1740-41, 82 USPQ2d at 1396. The Court noted that "[t]o facilitate review, this analysis should be made explicit." *Id.* at 1741, 82 USPQ2d at 1396 (citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")). However, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of

ordinary skill in the art would employ." *Id.* The Court cautioned that "[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *Id.* at 1742, 82 USPQ2d at 1397.

The Court noted that "[i]n many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends." *KSR*, 127 S. Ct. at 1741, 82 USPQ2d at 1396. "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 1741, 82 USPQ2d at 1397. The Court also noted that "[c]ommon sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* at 1742, 82 USPQ2d at 1397. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.*

Furthermore, the Supreme Court explained that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *KSR*, 127 S. Ct. at 1742, 82 USPQ2d at 1397. "If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense," *id.* and, in such an instance "the fact that a combination was obvious to try might show that it was obvious under § 103" *id.*

The Federal Circuit recently concluded that it would have been obvious to combine (1) a device for actuating a phonograph to play back sounds associated with a letter in a word on a puzzle piece with (2) a processor-driven device capable of playing the sound associated with a first letter of a word in a book. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161, 82 USPQ2d 1687, 1690-91 (Fed. Cir. 2007). In reaching that conclusion, the Federal Circuit recognized that "[a]n obviousness determine is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not." *Id.* at 1161, 82 USPQ2d at 1687 (citing *KSR*, 127 S. Ct. 1727, 1739, 82 USPQ2d 1385, 1395 (2007)).

Although the combination of prior art references lacked a "reader" to automatically identify the book inserted in the device, the Federal Circuit found no error in the District Court's determination that readers were well known in the art at the time of the invention. *Id.* at 1162, 82 USPQ2d at 1691. In addition, the Court found that the reasons for adding a reader to the combination of prior art references "are the same as those for using readers in other children's toys-namely, providing an added benefit and simplified use of the toy for the child in order to increase its marketability." *Id.* at 1162, 82 USPQ2d at 1692. The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was "uniquely challenging or difficult for one of ordinary skill in the art" or "represented an unobvious step over the prior art." *Id.* (citing *KSR*, 127 S. Ct. at 1740-41, 82 USPQ2d at 1396).

ANALYSIS

All timely filed evidence and properly presented argument is considered by the Board in resolving an obviousness issue on appeal. *See In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

In the examination of a patent application, the Examiner bears the initial burden of showing a prima facie case of unpatentability. *Id.* at 1472, 223 USPQ at 788. When that burden is met, the burden then shifts to the applicant to rebut. *Id.*; *see also In re Harris*, 409 F.3d 1339, 1343-44, 74 USPQ2d 1951, 1954-55 (Fed. Cir. 2005) (finding rebuttal evidence unpersuasive). If the applicant produces rebuttal evidence of adequate weight, the prima facie case of unpatentability is dissipated. *In re Piasecki*, 745 F.2d at 1472, 223 USPQ at 788. Thereafter, patentability is determined in view of the entire record. *Id.* However, on appeal to the Board it is an appellant's burden to establish that the Examiner did not sustain the necessary burden and to show that the Examiner erred -- on appeal we will not start with a presumption that the Examiner is wrong.

As will be discussed *infra*, we conclude that the differences between the prior art and the claimed subject matter are such that the claimed subject matter as a whole would have been obvious to a person having ordinary skill in the art at the time the invention was made. We find that the Appellants have not shown that the Examiner failed to make out a prima facie showing of obviousness with respect to claims 1-3, 5-15, and 17-29. Appellants failed to meet the burden of overcoming that prima facie showing.

Graham Factors

The differences between the prior art and the claimed invention are found in the claim limitation "allowing the user to digitally point to selected designated portions [sic--portions] of the cached document and only loading the designated portions of the cached document." Except as discussed here, all other limitations of claim 1 are found in the prior art.

We find "little difference," *KSR*, 127 S. Ct. at 1743, 82 USPQ2d at 1398, between the teachings of Acharya and Gong and the process recited by claim 1. Specifically, the prior art does not show "allowing the user to digitally point to selected designated portions [sic--portions] of the *cached* document and only loading the designated portions of the *cached* document" (differences in bold italics). (FF 11, 19.) In other words, the difference between the claimed invention and the prior art reduces to the nature of the document (i.e., a *cached* document) to which the user digitally points to selected designated portions and only loads the designated portions.

As will be discussed, *infra*, in the prior art the user has the option to select a portion of a document (FF 1, 6-9), but not specifically the option to select a portion of a *cached* document (FF 11, 19). Also, the user does not have control over whether the designated portions of the document will be loaded from cache or from a different source. (FF 11, 19.) In the prior art, that choice is made automatically under computer program control. (FF 7-9, 13.) Thus, the prior art does not show a user digitally pointing to selected designated portions of a *cached* document and only loading those designated portions of the *cached* document. (See FF 11, 19.)

In particular, Acharya broadly teaches giving the user control over the process of selecting portions of a Web page for retrieval. After discussing

the problem of latency, Acharya teaches that users are likely to welcome an option to retrieve a selected version of a file that can be provided relatively quickly. (FF 2-3.) Acharya also teaches that users are likely to choose to reject some files, receive a selected version of other files fairly quickly, and would be willing to wait longer for a selected version of other files. (FF 1, 3.) Acharya further teaches that there are reasons other than latency why users desire control.³ (FF 4.)

In addition, Acharya teaches the technique of caching as a solution to the problem of latency (FF 5), and Gong teaches speeding up the operation of a browser by using caching techniques (FF 13).

Gong discusses the problem of old information displayed on a Web page, noting that an inexperienced user may be unaware that a Web page contains "old" information retrieved from cache rather than only "new" information. (FF 14.)

Gong teaches that a browser usually retrieves a Web page either entirely from cache, or partly from cache and partly from the originating network server. (FF 13.) Gong explains that partial retrieval usually occurs automatically (i.e., without explicit user request). (FF 13.)

Gong also teaches that a status icon may be incorporated into a browser reload selection button to indicate that data in a currently viewed page is old or at least partially old and to make selection of the reload function by the user a natural extension of the status indication. (FF 15, 17.)

³ Indeed, it is common for users to want to have control in many fields of endeavor. For example, automobile drivers may want to have control over gear shifting by using a manual transmission rather than giving up that control by using an automatic transmission. This is so even though an automatic transmission may be more convenient and fuel efficient.

However, Acharya does not teach that the file selected by the user is a *cached* file and does not teach that the selected file that is transmitted to the user is a *cached* file. (FF 11.) In addition, Gong does not teach that the user may decide to retrieve a Web page partly from cache and partly from the originating network server. (FF 19.)

The level of ordinary skill in the art may be evidenced by the prior art references. *In re GPAC Inc.*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995) ("Although the Board did not make a specific finding on skill level, it did conclude that the level of ordinary skill in the art . . . was best determined by appeal to the references of record We do not believe that the Board clearly erred in adopting this approach."); *see also In re Oelrich*, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature").

Apart from the references and their specification, the Appellants have not addressed the level of ordinary skill in the pertinent art. Therefore like the Examiner, we consider the level of ordinary skill in the art to be shown by the references of record, including Acharya, Gong, and Banga, as well as background material set out in the specification. (See FF 1-20.)

No evidence was submitted regarding secondary considerations of nonobviousness.

Obviousness

Based upon the *Graham* factual determinations, we conclude that the subject matter of claim 1 would have been obvious to a person of ordinary skill in the art at the time the invention was made because "[t]he gap

between the prior art and [Appellants'] system is simply not so great as to render the system nonobvious to one reasonably skilled in the art." *Dann*, 425 U.S. at 230, 189 USPQ at 261. We base this conclusion on three alternative rationales, as explained in subsections A, B, and C:

(A) the claimed subject matter is a choice from a finite number of identified, predictable solutions to a problem, with a reasonable expectation of success;

(B) the claimed subject matter is an application of a known technique to a known system ready for improvement to yield predictable results; and

(C) the claimed subject matter is a predictable variation of a known work that would have been promoted based upon design incentives.

A.

We conclude that allowing a user to digitally point to selected designated portions of a cached document and loading only those designated portions of the cached document would have been obvious because it is a choice from a finite number of identified, predictable solutions to the problem of latency. "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *KSR*, 127 S. Ct. at 1742, 82 USPQ2d at 1397.

Latency is recognized as a problem for current Web browsers. (FF 2.) Caching is an identified, predictable solution to the design need of latency. (FF 5.) In particular, caching is a known technique for speeding up the operation of a Web browser. (FF 13.) Controlling the selection and loading of portions of a document (e.g., a Web page) also is an identified,

predictable solution to the design need of latency (FF 3, 10). The selected document that is loaded may be a cached document. (FF 9, 13.)

There are a finite number of identified, predictable ways to control the selection and loading of documents. In particular, the prior art discloses two options for controlling the selection of documents: (1) giving the user control over selection of the document (FF 6-9, 15); and (2) giving the computer control over selection of the document (FF 7, 13). The prior art also discloses two options for controlling the loading of documents: (1) giving the user control over loading the document (FF 6-9, 15); and (2) giving the computer control over loading the document (FF 7, 13). Appellants have not pointed to any other option for controlling the selection and loading of a document and we know of no other option.

A person of ordinary skill in the art would have had good reason to pursue the known options of giving the user control over selecting and loading documents when selecting and loading portions of a cached document. It would require no more than "ordinary skill and common sense," *KSR*, 127 S. Ct. at 1742, 82 USPQ2d at 1397, to give the user (rather than the computer program) control over digitally pointing to selected portions of a cached Web page and loading only those designated portions.

One of ordinary skill in the art would have pursued the known potential solutions to the problem of latency with a reasonable expectation of success. Appellants have presented no evidence that giving the user (rather than the computer program) control over selection and loading of portions of a cached document "was uniquely challenging or difficult for one of ordinary skill in the art," *Leapfrog*, 485 F.3d at 1162, 82 USPQ2d at 1692,

nor have Appellants presented evidence that this "represented an unobvious step over the prior art" *id.*

Therefore, the claimed subject matter would have been obvious to a person having ordinary skill in the art at the time the invention was made.

B.

As an alternative, we conclude that allowing a user to digitally point to selected designated portions of a cached document and loading only those designated portions of the cached document would have been obvious because it is an application of the known technique of giving control to the user, disclosed in Acharya, to the known system of a Web browser, disclosed in Gong, ready for improvement to yield predictable results. "[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *KSR*, 127 S. Ct. at 1740, 82 USPQ2d at 1396.

The prior art system of Gong teaches a Web browser with a status indicator that informs the user that a displayed Web page is new, partially old, or old. (FF 12.) The Web browser of Gong selects and retrieves a portion of the Web page from cache under computer program (browser) control. (FF 13.) A user may select a reload button on the Web browser to reload the displayed Web page. (FF 14-15.)

The prior art also teaches the known technique of giving the user control over selection of a portion of a Web page. (FF 6-9.) A person of ordinary skill in the art would have recognized that applying the known technique of giving the user control over the selection of a portion of a Web

page would have yielded predictable results and would have improved the Web browser of Gong when selecting and loading cached Web pages. In addition, allowing the user to select and load portions of the cached Web page follows naturally and directly from Gong's teaching of a Reload button that makes "selection of the reload function a natural extension of" the Web page status indication. (FF 17.)

Again, Appellants have presented no evidence that giving the user (rather than the computer program) control over selection and loading of portions of a cached document "was uniquely challenging or difficult for one of ordinary skill in the art," *Leapfrog*, 485 F.3d at 1162, 82 USPQ2d at 1692, nor have Appellants presented evidence that this "represented an unobvious step over the prior art" *id.*

Therefore, the claimed subject matter would have been obvious to a person having ordinary skill in the art at the time the invention was made.

C.

As a further alternative, we conclude the claimed subject matter would have been obvious because design incentives to solve the problem of latency would have prompted a predictable variation in the prior art system of Gong to apply the known principle of giving control to the user, disclosed in Acharya, in order to allow a user to digitally point to selected designated portions of a cached document and load only those designated portions of the cached document. "When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can

implement a predictable variation, §103 likely bars its patentability." *KSR*, 127 S. Ct. at 1740, 82 USPQ2d at 1396.

In particular, the design incentive of solving the problem of latency would have prompted one of ordinary skill in the art to implement a predictable variation of the prior art system of Gong by applying the known principle of giving control to the user, disclosed in Acharya, to allow the user, rather than the browser, to point to selected designated portions of a cached Web page and only load those designated portions. The differences between the claimed invention and the prior art are encompassed by applying the known principle of giving control to the user to the system of Gong.

One of ordinary skill in the art, in view of the design incentives to solve the problem of latency, would have implemented the claimed variation of the prior art system of Gong. Also, the claimed variation would have been predictable to a person of ordinary skill in the art. As previously noted, Appellants have presented no evidence that giving the user (rather than the computer program) control over selection and loading of portions of a cached document "was uniquely challenging or difficult for one of ordinary skill in the art," *Leapfrog*, 485 F.3d at 1162, 82 USPQ2d at 1692, nor have Appellants presented evidence that this "represented an unobvious step over the prior art" *id.*

Therefore, the claimed subject matter would have been obvious to a person having ordinary skill in the art at the time the invention was made.

Arguments of the Appellants

Appellants argue that Acharya in combination with Gong and Banga does not disclose allowing the user to select designated portions of a document, where the document is a cached document, as claimed. (Br. 5-6; Reply Br. 3-4.) Instead, Appellants argue that the references disclose allowing the user to select different and complete versions of a file. (Br. 5-6; Reply Br. 3-4.) We disagree.

During examination of patent application, a claim is given its broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). "[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc) (internal citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313, 75 USPQ2d at 1326.

While it is true that Acharya teaches user selection of different and complete versions of a file (FF 6-9), that file is part of the "skeleton" of a Web page containing multiple files (FF 7-8). The plain meaning of the claim term "portion" is "a part or limited quantity of anything." Webster's New World Dictionary Third College Edition 1052 (1994). Under a reasonable interpretation of claim 1, a file that is part of a "skeleton" of a Web page is a portion of a Web page. Thus, by teaching user selection of a file that is part of a Web page "skeleton," Acharya teaches user selection of a portion of a Web page.

However, Acharya does not specifically teach that the user-selected portion of a Web page is a portion of a *cached* Web page. (FF 11.) In Acharya, the computer program -- rather than the user -- decides whether to select a cached version of the file or generate a new version of the file. (FF 5, 7-9.) Nevertheless, as discussed above, we conclude that the differences between the claimed invention and the prior art are not sufficient to render claim 1 nonobvious to a person having ordinary skill in the art at the time the invention was made.

Appellants also argue that the Examiner relied on an incorrect interpretation of the term "digitally pointing" in finding that the term "digitally pointing" reads on a user selecting a hyperlink. (Br. 5; Reply Br. 4.) Specifically, Appellants argue that "[t]here is a very distinct difference between clicking on an object and digitally pointing to it (hovering over it or using a "mouseover")." (Br. 5.) We do not agree.

The Examiner found that Acharya discloses digitally pointing to selected designated portions of the cached document. (Answer 3.) The Examiner pointed to column 4, lines 46-53 of Acharya, which discloses user selection of a hyperlink on a Web page and downloading the desired version of the selected document. (Answer 3.) The Examiner also noted without any additional discussion that "[f]urther support for this rationale is found in Acharya, column 9, lines 9-48." (Answer 6.) This portion of Acharya cited by the Examiner discusses the process illustrated in Figure 4 for selecting a version of a file and loading the selected version of the file (*see* FF 8-9). Although not expressly mentioned by the Examiner, we also draw attention to column 8, lines 61-64 and column 9, line 8 of Acharya, which explains more fully the "skeleton" structure of the Web page (*see* FF 8-9).

See In re Heck, 699 F.2d 1331, 1333, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (explaining that patents are "relevant for all they contain").

We agree with the Examiner that "selecting a hyperlink in Acharya involved rolling a cursor over the address to digitally point to the address." (Answer 4.) Further, Acharya teaches the skeleton structure of a Web page. (FF 7-8.) Under a reasonable interpretation of claim 1, a user selects a portion of a Web page by selecting a hyperlink to a document.

Again, Acharya does not specifically teach that the user-selected portion of a Web page is a portion of a *cached* Web page. (FF 11.) In addition, although Gong teaches allowing the user to digitally point to an entire cached document (FF 15), it does not teach allowing the user to digitally point to a *portion* of a cached document (FF 19). Nevertheless, as discussed above, we conclude that the differences between the claimed invention and the prior art are not sufficient to render claim 1 nonobvious to a person having ordinary skill in the art at the time the invention was made.

Appellants next argue that the references do not disclose only loading the designated portions of the document, where the document is a cached document, as claimed. (Reply Br. 4.) Instead, Appellants argue that the references disclose "completely loading the selected version of the file." (Reply Br. 4.) We disagree.

The Examiner found that Acharya discloses only loading the designated portion of a document. (Answer 3, 6.) While it is true that Acharya teaches completely loading the selected version of the file (FF 6-9), that file is part of the "skeleton" of a Web page containing multiple files (FF 7-8). Thus, under a reasonable interpretation of claim 1, Acharya teaches loading a designated portion of a Web page.

However, Acharya does not specifically teach that the designated portion of the Web page that is loaded is a designated portion of a *cached* Web page. (FF 11.) Nevertheless, as discussed above, we conclude that the differences between the claimed invention and the prior art are not sufficient to render claim 1 nonobvious to a person having ordinary skill in the art at the time the invention was made.

Finally, Appellants argue that the Examiner used impermissible hindsight because of the Examiner's "contention that the selection of a hyperlink consists of a user digitally pointing [selection of] to an address [hyperlink]." (Br. 6; *see also* Reply Br. 4.) The Examiner concluded that the rejection was proper because only knowledge within the level of ordinary skill in the art at the time the invention was made was taken into account. (Answer 6.)

We do not find error in the Examiner's position, and do not agree that the Examiner used impermissible hindsight in making the rejection. As discussed above, the Examiner correctly found that the "digitally pointing" claim limitation reads on selecting a hyperlink.

CONCLUSION OF LAW

Based on the findings of facts and the analysis above, we conclude that the Examiner did not err in rejecting claims 1-3, 5-15, and 17-29. The rejection of those claims is affirmed.

DECISION

The rejection of claims 1-3, 5-15, and 17-29 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tdl

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